



Event

MPTS AJET ON 4101 - ON 4105 T-45

Mission

**OPERATIONAL NAVIGATION
1.3 HOURS/X**



ORM



ON 4101 - 4105

- **OPERATIONAL REQUIREMENTS / LIMITATIONS**
 - **CREW REST/ CREW DAY / WORK WEEK**
 - **WARM-UP ELIGIBILITY**
 - **PREVIOUS FLIGHT COMPLETE?**
 - **IP CURRENCY**
 - **READ AND INITIAL**

- **HUMAN FACTORS**
 - **LIFE STRESSORS / EXTERNAL FACTORS/ PERSONAL PROBLEMS**
 - **MEDICAL STATUS**
 - **CREW DAY**
 - **CREW REST**
 - **NOURISHMENT**
 - **HYDRATION**

- **HAZARDS AND CONTROLS**
 - **ROUTINE**
 - **WEATHER**
 - **CURRENT OBSERVATIONS AND FORECASTS**
 - **CROSSWINDS**
 - **FUEL CONSIDERATIONS**



TTO



ON 4101 - 4105

- **WHO WILL CALL A TTO?**
- **WHAT SITUATIONS WILL THE TTO BE CALLED?**
 - **SAFETY**
 - **CONFUSION**
 - **MISUNDERSTANDING**
- **IP RESPONSIBILITIES**
 - **RECOGNIZE THE NEED FOR A TTO**
 - **EXPLANATION / INSTRUCTION AS NECESSARY**
 - **DOCUMENTATION ON ATF**
- **WHEN AND HOW WILL TRAINING RESUME?**



SSR/DISCUSS ITEMS



ON 4101 - 4105

- **SPECIAL SYLLABUS REQUIRMENTS:**
 - NONE
- **PREREQUISITES:**
 - ON 3103
- **DISCUSS ITEMS:**

ON 4101

- NATOPS/SOP/EP QOD
- EMERGENCY BINGO
- MAXIMUM RANGE PROFILE
- INADVERTENT LOW ALTITUDE IMC
- LOW ALTITUDE EMERGENCIES

ON 4102

- NATOPS/SOP/EP QOD
- LOW ALTITUDE FLIGHT SAFETY
- SUN ANGLES
- SHADOWS



DISCUSS ITEMS CONT'D



ON 4101 - 4105

- DISCUSS ITEMS:

ON 4103

- NATOPS/SOP/EP QOD
- LOW ALTITUDE FLIGHT SAFETY
- RIDGELIND CROSSING
- WAYPOINT DATE ENTRY

ON 4104

- NATOPS/SOP/EP QOD
- LOW ALTITUDE FLIGHT SAFETY
- MISSION TASK MANAGEMENT
- AUTOSEQUENTIAL STEERING



DISCUSS ITEMS CONT'D



ON 4101 - 4105

- DISCUSS ITEMS:

- ON 4105

- NATOPS/SOP/EP QOD
 - LOW ALTITUDE FLIGHT SAFETY
 - TACTICAL IMPLICATIONS OF TIMING
 - GO/NO-GO CRITERIA



SYLLABUS NOTES



ON 4101 - 4105

A.THESE EVENTS WILL BE FLOWN FROM THE FRONT COCKPIT.

B.BRIEF 2+00 PRIOR TO TAKEOFF FOR ON 4101.

C.SNA IS REQUIRED TO COMPLETE FOUR ORIGINAL JMPS-GENERATED ONAV CHARTS, SIMULATOR AND AIRCRAFT COMBINED, DURING SINGLE PLANE ONAV'S. THE SNA IS AUTHORIZED TO COPY THE ORIGINAL CHART FOR THE IP ON THOSE FLIGHTS.

D.STUDENTS MUST HAVE A MINIMUM 24 HOURS NOTICE PRIOR TO EACH PREVIOUSLY UNPLANNED ONAV EVENT FOR PREFLIGHT PLANNING.



SYLLABUS NOTES CONT'D



ON 4101 - 4105

- E. ALL ONAV ROUTES SHOULD BE FLOWN AT 360 KNOTS.**
- F. STUDENTS MUST FLY FOUR DIFFERENT ROUTES IN THIS BLOCK OF TRAINING. STUDENTS MAY NOT FLY THE SAME ROUTE TWICE USING THE SAME METHOD OF NAVIGATION (DEAD RECKONING/WAYPOINT NAVIGATION).**
- G. ALL ONAV ROUTES MAY BE FLOWN AS LEGS OF A CROSS-COUNTRY.**
- H. ON 4101 AND ON 4102 ARE DR NAVIGATION FLIGHTS. ON 4103 - ON 4105 ARE SYSTEM NAVIGATION FLIGHTS. THIS DOES NOT ELIMINATE THE REQUIREMENT FOR CHART PREPARATION.**



ADMIN (CARD)



ON 4101 - 4105

- **A/C - ATC C/S - CREW**
- **BRIEF / WALK / TAKEOFF / LAND TIMES**
- **ATC CLEARANCE / DD-175**
- **FUEL PLAN/LADDER**
- **LINE / T/O / ABORT / RPM**
- **COMM PLAN**
- **NAV PLAN**



ADMIN



ON 4101 - 4105

- **LAUNCH**
 - **WEATHER / NOTAMS / TFR / BASH**
 - **PREFLIGHT / START / TAXI**
 - **ITO**
 - **SWAPPING OF CONTROLS**
 - **ENROUTE PROCEDURES**
 - **RADALT USAGE**

- **RTB**
 - **RECOVERY**
 - **DIVERTS**



ON 4101 - 4105

CONDUCT



- **TIMS RESUME REVIEW**

- **PRACTICE:**
 - **CHECKLISTS/COMM/GROUND OPS**
 - **TAKEOFF/DEPARTURE/FLIGHT ADMIN**
 - **ENROUTE NAVIGATION**
 - **ROUTE ENTRY**
 - **DEAD RECKONING**
 - **LOW-LEVEL WAYPOINT NAVIGATION**
 - **ALTITUDE CONTROL**
 - **TIME CONTROL**



CONDUCT



ON 4101 - 4105

- **PRACTICE CONTINUED:**
 - **COURSE CONTROL**
 - **IN-FLIGHT COMPUTATION**
 - **CHART INTERPRETATION**
 - **TURNS**
 - **RIDGE CROSSING**
 - **WEATHER RESPONSE**
 - **ROUTE ABORT/EXIT**
 - **STRIKE MANEUVERING**
 - **BINGO**
 - **DESCENT/FIELD ENTRY**
 - **FF ROLL-AND-GO**
 - **LANDING(S)**



BLOCK MIF



ON 4101 - 4105

CTS REF	MANEUVER	ON4105
1	General Knowledge/Procedures	4+
2	Emergency Procedures	3+
3	Headwork/Situational Awareness	3+
4	Basic Airwork	4+
5	Mission Planning/Briefing/Debriefing	4+
6	Communications	3+
7	Ground Operations	4+
8	Flight Admin	4+
10	Takeoff	4+
11	Departure	4+
12	Enroute Navigation	4+
40	Route Entry	4+
40	Dead Reckoning	3+
40	Low-Level Waypoint Navigation	4+

40	Altitude Control	4+
40	Time Control	4+
40	Course Control	4+
40	In-flight Computation	4+
40	Chart Interpretation	4+
40	Turns	4+
40	Ridge Crossing	3
40	Weather Response	3+
40	Route Abort/Exit	4+
49	Strike Maneuvering	1
2	Bingo	3+
13	Descent/Field Entry	4+
23	FF Roll-and-Go	4+
23	Landing(s)	4+



Emergencies



ON 4101 - 4105

- **AIRCRAFT FALLOUT**
- **CLEAR ENGINE PROCEDURE**
- **ABORTED TAKEOFF**
- **RWY DEP / LOSS OF DIRECTIONAL CONTROL**
- **SYSTEM FAILURES/ EPs / CRM**
- **BIRD STRIKE/ MIDAIR**
- **RADIO/ ICS FAILURE**
- **LOSS OF NAVAIDS / LOST PLANE**
- **INADVERTENT IMC / LOST SIGHT / LCLS**
- **DISORIENTATION / VERTIGO**
- **HYPOXIA**
- **EJECTION (HIGH / LOW / GROUND)**
- **SAR / ON SCENE COMMANDER**
- **DIVERT(S) / BINGO FUEL TO DIVERT**



STANDARD DEBRIEFING FORMAT



ON 4101 - 4105

- THE FLIGHT LEAD OR PILOT-IN-COMMAND IS RESPONSIBLE FOR ENSURING ALL FLIGHT OR CREWMEMBERS ARE THOROUGHLY DEBRIEFED ON THE CONDUCT OF THE MISSION UTILIZING THE “S-P-B-E-MS-LL” FORMAT OUTLINED BELOW.

- I. SAFETY
- II. PLANNING
- III. BRIEF
- IV. EXECUTION
- V. MISSION SUCCESS
- VI. LESSONS LEARNED